

Serial No: 09/854,031

REMARKS

This Amendment is in response to the Office Action dated October 21, 2004. In the Office Action, claims 6, 7, 10, 20, 21, 24, 37, 38, 41, 50, 60, 61, 64-69, 71, 73-81, 87 and 88 were rejected under 35 USC §112. Claims 1-100 were rejected under 35 USC §112. By this Amendment, claims 7, 21, 50, 60, 61, 71, 81, 82, 87 and 88 are amended. Currently pending claims 1-100 are believed allowable, with claims 1, 15, 29, 32, 44, 47, 50 and 82 being independent claims.

CLAIM REJECTIONS UNDER 35 USC §112:

Claims 50, 60, 61, 71, 81, 87 and 88 were rejected under 35 USC §112 as being indefinite due to use of the terms "useful" and "beneficial". Office Action, paragraph 5. By this Amendment, claims 50, 60, 61, 71, 81, 82, 87 and 88 are amended and no longer contain the terms "useful" and "beneficial". The amendments to claims 50, 60, 61, 71, 81, 87 and 88 do not narrow the scope of the claims and not made to overcome the cited documents.

Claims 6, 7, 10, 20, 21, 24, 37, 38, 41, 64-69 and 73-80 were rejected under 35 USC §112 as containing the trademarks or trade names "JAVA" and "C#" and explicit references to methods, classes and packages defined as part of the JAVA Security Architecture. Office Action, paragraph 6.

Regarding the word "C#", the Applicant is unaware if any trademark ownership rights to the term "C#". It is kindly requested that evidence of trademark ownership to the term "C#", as used in the claims, be provided so that appropriate corrections to the claims can be made.

Regarding the use of names of Java packages and classes, the Office Action makes reference to 35 U.S.C. 112, MPEP 2173.05(u) and *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982) as grounds for rejecting use of method names, class names and package names. Office Action, paragraphs 6 and 7. The Applicant respectfully submits that neither 35 U.S.C. 112, MPEP 2173.05(u) nor *Ex parte Simpson* prohibit the use of method names, class names and package names in the patent application claims. Furthermore, the Applicant is unaware if any trademark ownership rights to method names, class names and package names in Java. It is kindly requested that evidence of trademark ownership to method names, class names and package names in Java, as used in the claims, be provided so that appropriate corrections to the claims can be made.

Serial No: 09/854,031

Regarding the word "Java", the Applicant respectfully submits that Java, as used in the claims, refers to the generic high-level Java programming language implemented by various organizations and companies (see, e.g., <http://directory.google.com/Top/Computers/Programming/Languages/Java/Implementations/>). Thus, the term "Java" in the claims does not refer to a specific Java implementation originating from a particular manufacturer. The Applicant therefore traverses this rejection.

It is noted that claims 7 and 21 are amended herein to correct grammatical errors. Amendment to these claims is not made to overcome the cited documents or for reasons of patentability.

CLAIM REJECTIONS UNDER 35 USC §103:

Claims 1-5, 11-19, 25-36, 42-50, 59-62, 70-72 and 82-100 were rejected under 35 USC §103 as obvious over Nyanchama, "The Role Graph Model and Conflict of Interest" (hereinafter Nyanchama) in view of Schmidt, "Data Flow Analysis is Model Checking of Abstract Interpretations" (hereinafter Schmidt). Office Action, paragraph 10.

Claims 6-10, 20-24, 37-41, 52-58, 63-69 and 73-81 were rejected under 35 USC §103 as obvious over Nyanchama and Schmidt, and in further view of Gong, "Java Security Architecture (JDK 1.2)" (hereinafter Gong). Office Action, paragraph 30.

Claim 51 were rejected under 35 USC §103 as obvious over rejected as obvious over Nyanchama and Schmidt, and in further view of U.S. Patent No. 5,428,554 to Laskoski (hereinafter Laskoski). Office Action, paragraph 40.

I. THE CITED DOCUMENTS DO NOT TEACH OR SUGGEST ALL THE CLAIM LIMITATIONS

A *prima facie* case for obviousness can only be made if the combined reference documents teach or suggest all the claim limitations. MPEP 2143. "All words in a claim must be considered in judging the patentability of that claim against the prior art." MPEP 2143.03 citing *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

Serial No: 09/854,031

Claim 1

Claim 1 of the present Application recites, in part, "obtaining a collection of code; providing a program graph representing said collection of code; identifying any authorization resources of said collection of code; locating any bounded path within said program graph; and associating said any authorization resource with said any bounded path." Application, claim 1. The Office Action states that Nyanchama teaches these claim limitations. Office Action, paragraph 11.

Nyanchama appears to describe role-based access control (RBAC) algorithms that assist network administrators or security officers manage access rights for various network users. Nyanchama, pages 1-2. For example, the teachings of Nyanchama can be applied to manage whether one can access the salary information of employees in an organization or whether users in a given project are assigned to a group. Nyanchama, pages 7-8. Nyanchama defines roles as a named set of privileges. Nyanchama, page 5. Role graphs are defined as acyclic, directed graphs in which the nodes represent the roles in a system and the edges represent hierarchical relationship of users. Nyanchama, page 9. For example, a role graph may include nodes such as a company's president, vice presidents and junior employees. Nyanchama, Fig. 3.

It is respectfully submitted that Nyanchama fails to teach or suggest obtaining a collection of code, providing a program graph representing the collection of code, identifying any authorization resources of the collection of code, locating any bounded path within the program graph, and associating the authorization resource with the any bounded path. As discussed above, Nyanchama deals with managing access rights of network users and does not discuss the above limitations of claim 1. For at least this reason, claim 1 is believed allowable over the cited documents. Allowance of claim 1 is therefore earnestly solicited.

Serial No: 09/854,031

Claims 2-14, 92 and 100

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Claims 2-14, 92 and 100 are dependent on and further limit claim 1. Since claim 1 is believed allowable, claims 2-14, 92 and 100 are also believed allowable for at least the same reasons as claim 1.

Furthermore, in rejecting claim 4, the Office Action takes Official Notice that the limitations of this claim are obvious. Office Action, paragraph 15. The Applicant believes that limitations of claim 4 are novel in there own right, and therefore cannot agree with the Official Notice assertions in the Office Action. Thus, the Applicant respectfully demands authority be produced supporting the Official Notice in accordance with MPEP 2144.03(C).

Claim 15

Claim 15 of the present Application recites, in part, "means for obtaining a collection of code; means for providing a program graph representing said collection of code; means for identifying any authorization resources of said collection of code; means for locating any bounded path within said program graph; and means for associating said any authorization resource with said any bounded path." Application, claim 15. The Office Action states that Nyanchama teaches these claim limitations. Office Action, paragraph 21.

As mentioned above, Nyanchama appears to describe role-based access control (RBAC) algorithms that assist network administrators or security officers manage access rights for various network users. Nyanchama, pages 1-2. For example, the teachings of Nyanchama can be applied to manage whether one can access the salary information of employees in an organization or whether users in a given project are assigned to one group. Nyanchama, pages 7-8. Nyanchama defines roles as a named set of privileges. Nyanchama, page 5. Role graphs are defined as acyclic, directed graphs in which the nodes represent the roles in a system and the edges represent hierarchical relationship of users. Nyanchama, page 9. For example, a role graph may include nodes

Serial No: 09/854,031

such as a company's president, vice presidents and junior employees. Nyanchama, Fig. 3.

It is respectfully submitted that Nyanchama fails to teach or suggest means for obtaining a collection of code, means for providing a program graph representing the collection of code, means for identifying any authorization resources of the collection of code, means for locating any bounded path within the program graph, and means for associating said any authorization resource with the bounded path. As discussed, Nyanchama deals with managing access rights of network users and does not discuss the above limitations of claim 15. For at least this reason, claim 15 is believed allowable over the cited documents. Allowance of claim 15 is therefore earnestly solicited.

Claims 16-28 and 96

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Claims 16-28 and 96 are dependent on and further limit claim 15. Since claim 15 is believed allowable, claims 16-28 and 96 are also believed allowable for at least the same reasons as claim 15.

Claim 29

Claim 29 of the present Application recites, in part, "obtaining a collection of code; providing a program graph representing said collection of code; and identifying a complete set of authorization resources of said collection of code." Application, claim 29. The Office Action states that Nyanchama teaches these claim limitations. Office Action, paragraph 22.

As mentioned above, Nyanchama appears to describe role-based access control (RBAC) algorithms that assist network administrators or security officers manage access rights for various network users. Nyanchama, pages 1-2. For example, the teachings of Nyanchama can be applied to manage whether one can access the salary information of employees in an organization or whether users in a given project are assigned to one group. Nyanchama, pages 7-8. Nyanchama defines roles as a named set of privileges. Nyanchama, page 5. Role graphs are defined as acyclic, directed graphs in which the nodes represent the

Serial No: 09/854,031

roles in a system and the edges represent hierarchical relationship of users. Nyanchama, page 9. For example, a role graph may include nodes such as a company's president, vice presidents and junior employees. Nyanchama, Fig. 3.

It is respectfully submitted that Nyanchama fails to teach or suggest obtaining a collection of code, providing a program graph representing the collection of code, and identifying a complete set of authorization resources of the collection of code. As discussed, Nyanchama deals with managing access rights of network users and does not discuss the above limitations of claim 29. For at least this reason, claim 29 is believed allowable over the cited documents. Allowance of claim 29 is therefore earnestly solicited.

Claims 30, 31 and 93

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Claims 30, 31 and 93 are dependent on and further limit claim 29. Since claim 29 is believed allowable, claims 30, 31 and 93 are also believed allowable for at least the same reasons as claim 29.

Furthermore, in rejecting claim 30, the Office Action takes Official Notice that the limitations of this claim are obvious. Office Action, paragraph 23. The Applicant believes that limitations of claim 30 are novel in their own right, and therefore cannot agree with the Official Notice assertions in the Office Action. Thus, the Applicant respectfully demands authority be produced supporting the Official Notice in accordance with MPEP 2144.03(C).

Claim 32

Claim 32 of the present Application recites, in part, "an authorization resource identifier to identify any authorization resources within the collection of code; a bounded path locator to locate any bounded path within a program graph of said collection of code; and an associator to associate said any authorization resource with said any bounded path." Application, claim 32. The Office Action states that Nyanchama teaches these claim limitations. Office Action, paragraph 24.

Serial No: 09/854,031

As mentioned above, Nyanchama appears to describe role-based access control (RBAC) algorithms that assist network administrators or security officers manage access rights for various network users. Nyanchama, pages 1-2. For example, the teachings of Nyanchama can be applied to manage whether one can access the salary information of employees in an organization or whether users in a given project are assigned to one group. Nyanchama, pages 7-8. Nyanchama defines roles as a named set of privileges. Nyanchama, page 5. Role graphs are defined as acyclic, directed graphs in which the nodes represent the roles in a system and the edges represent hierarchical relationship of users. Nyanchama, page 9. For example, a role graph may include nodes such as a company's president, vice presidents and junior employees. Nyanchama, Fig. 3.

It is respectfully submitted that Nyanchama fails to teach or suggest an authorization resource identifier to identify any authorization resources within the collection of code, a bounded path locator to locate any bounded path within a program graph of the collection of code, and an associator to associate any authorization resource with any bounded path. As discussed, Nyanchama deals with managing access rights of network users and does not discuss the above limitations of claim 32. For at least this reason, claim 32 is believed allowable over the cited documents. Allowance of claim 32 is therefore earnestly solicited.

Claims 33-43 and 97

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Claims 33-43 and 97 are dependent on and further limit claim 32. Since claim 32 is believed allowable, claims 33-43 and 97 are also believed allowable for at least the same reasons as claim 32.

Claim 44

Claim 44 of the present Application recites, in part, "an authorization resource identifier to completely identify any authorization resources within a collection of code; and a bounded path locator to locate any bounded path within a program graph of said

Serial No: 09/854,031

collection of code." Application, claim 44. The Office Action states that Nyanchama teaches these claim limitations. Office Action, paragraph 25.

As mentioned above, Nyanchama appears to describe role-based access control (RBAC) algorithms that assist network administrators or security officers manage access rights for various network users. Nyanchama, pages 1-2. For example, the teachings of Nyanchama can be applied to manage whether one can access the salary information of employees in an organization or whether users in a given project are assigned to one group. Nyanchama, pages 7-8. Nyanchama defines roles as a named set of privileges. Nyanchama, page 5. Role graphs are defined as acyclic, directed graphs in which the nodes represent the roles in a system and the edges represent hierarchical relationship of users. Nyanchama, page 9. For example, a role graph may include nodes such as a company's president, vice presidents and junior employees. Nyanchama, Fig. 3.

It is respectfully submitted that Nyanchama fails to teach or suggest an authorization resource identifier to completely identify any authorization resources within a collection of code, and a bounded path locator to locate any bounded path within a program graph of the collection of code. As discussed, Nyanchama deals with managing access rights of network users and does not discuss the above limitations of claim 44. For at least this reason, claim 44 is believed allowable over the cited documents. Allowance of claim 44 is therefore earnestly solicited.

Claims 45, 46 and 98

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Claims 45, 46 and 98 are dependent on and further limit claim 44. Since claim 44 is believed allowable, claims 45, 46 and 98 are also believed allowable for at least the same reasons as claim 44.

Claim 47

Claim 47 of the present Application recites, in part, "means for obtaining a collection of code; means for providing a program graph

Serial No: 09/854,031

representing said collection of code; and means for identifying a complete set of authorization resources of said collection of code." Application, claim 47. The Office Action states that Nyanchama teaches these claim limitations. Office Action, paragraph 26.

As mentioned above, Nyanchama appears to describe role-based access control (RBAC) algorithms that assist network administrators or security officers manage access rights for various network users. Nyanchama, pages 1-2. For example, the teachings of Nyanchama can be applied to manage whether one can access the salary information of employees in an organization or whether users in a given project are assigned to one group. Nyanchama, pages 7-8. Nyanchama defines roles as a named set of privileges. Nyanchama, page 5. Role graphs are defined as acyclic, directed graphs in which the nodes represent the roles in a system and the edges represent hierarchical relationship of users. Nyanchama, page 9. For example, a role graph may include nodes such as a company's president, vice presidents and junior employees. Nyanchama, Fig. 3.

It is respectfully submitted that Nyanchama fails to teach or suggest means for obtaining a collection of code, means for providing a program graph representing the collection of code, and means for identifying a complete set of authorization resources of the collection of code. As discussed, Nyanchama deals with managing access rights of network users and does not discuss the above limitations of claim 47. For at least this reason, claim 47 is believed allowable over the cited documents. Allowance of claim 47 is therefore earnestly solicited.

Claims 48, 49 and 99

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Claims 48, 49 and 99 are dependent on and further limit claim 47. Since claim 47 is believed allowable, claims 48, 49 and 99 are also believed allowable for at least the same reasons as claim 47.

Claim 50

Claim 50 of the present Application recites, in part, "constructing a program graph from a collection of code using static

Serial No: 09/854,031

analysis techniques; performing a data flow analysis using static analysis techniques; searching said program graph for any resource for executing said collection of code; identifying any bounded path within said program graph over which said resource is utilized; and associating said resource with said collection of code." Application, claim 50. The Office Action states that Nychama teaches these claim limitations. Office Action, paragraph 27.

As mentioned above, Nychama appears to describe role-based access control (RBAC) algorithms that assist network administrators or security officers manage access rights for various network users. Nychama, pages 1-2. For example, the teachings of Nychama can be applied to manage whether one can access the salary information of employees in an organization or whether users in a given project are assigned to one group. Nychama, pages 7-8. Nychama defines roles as a named set of privileges. Nychama, page 5. Role graphs are defined as acyclic, directed graphs in which the nodes represent the roles in a system and the edges represent hierarchical relationship of users. Nychama, page 9. For example, a role graph may include nodes such as a company's president, vice presidents and junior employees. Nychama, Fig. 3.

It is respectfully submitted that Nychama fails to teach or suggest constructing a program graph from a collection of code using static analysis techniques, performing a data flow analysis using static analysis techniques, searching said program graph for any resource for executing the collection of code, identifying any bounded path within the program graph over which the resource is utilized, and associating the resource with the collection of code. As discussed, Nychama deals with managing access rights of network users and does not discuss the above limitations of claim 50. For at least this reason, claim 50 is believed allowable over the cited documents. Allowance of claim 50 is therefore earnestly solicited.

Claims 51-81, and 94

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Serial No: 09/854,031

Claims 51-81 and 94 are dependent on and further limit claim 50. Since claim 50 is believed allowable, claims 51-81 and 94 are also believed allowable for at least the same reasons as claim 50.

Claim 82

Claim 82 of the present Application recites, in part, "statically detecting resources for a collection of code written in a computer programming language, by including the steps of: calculating if any code of said collection of code is part of a program graph; identifying any resource for said collection of code; determining any bounded path of nodes within said program graph which constrain said resources of said collection of code; and associating said any resource with said collection of code within said bounded path of nodes in said program graph." Application, claim 82. The Office Action states that Nyanchama teaches these claim limitations. Office Action, paragraph 28.

As mentioned above, Nyanchama appears to describe role-based access control (RBAC) algorithms that assist network administrators or security officers manage access rights for various network users. Nyanchama, pages 1-2. For example, the teachings of Nyanchama can be applied to manage whether one can access the salary information of employees in an organization or whether users in a given project are assigned to one group. Nyanchama, pages 7-8. Nyanchama defines roles as a named set of privileges. Nyanchama, page 5. Role graphs are defined as acyclic, directed graphs in which the nodes represent the roles in a system and the edges represent hierarchical relationship of users. Nyanchama, page 9. For example, a role graph may include nodes such as a company's president, vice presidents and junior employees. Nyanchama, Fig. 3.

It is respectfully submitted that Nyanchama fails to teach or suggest statically detecting resources for a collection of code written in a computer programming language, by including the steps of: calculating if any code of the collection of code is part of a program graph, identifying any resource for the collection of code, determining any bounded path of nodes within the program graph which constrain the resources of the collection of code, and associating any resource with the collection of code within the bounded path of nodes in the program

Serial No: 09/854,031

graph. As discussed, Nyanchama deals with managing access rights of network users and does not discuss the above limitations of claim 82. For at least this reason, claim 82 is believed allowable over the cited documents. Allowance of claim 82 is therefore earnestly solicited.

Claims 83-91, and 95

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Claims 83-91 and 95 are dependent on and further limit claim 82. Since claim 82 is believed allowable, claims 83-91 and 95 are also believed allowable for at least the same reasons as claim 82.

II. THERE IS NO SUGGESTION OR MOTIVATION TO COMBINE NYANCHAMA AND SCHMIDT

As mentioned above, claims 1-5, 11-19, 25-36, 42-50, 59-62, 70-72 and 82-100 were rejected as obvious over Nyanchama and Schmidt, claims 6-10, 20-24, 37-41, 52-58, 63-69 and 73-81 were rejected as obvious over Nyanchama and Schmidt in further view of Gong, and claim 51 was rejected as obvious over Nyanchama and Schmidt in further view of Laskoski.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation to modify the reference or to combine reference teachings. MPEP 2143. Both the suggestion and reasonable expectation of success must be founded in the prior art, not in applicants' disclosure. In re Vaack, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991) (citing In re Dow Chemical Co., 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988)). "Broad conclusory statements regarding the teachings of multiple references, standing alone, are not 'evidence.'" In re Dembicziak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed.Cir. 1999).

Nyanchama appears to describe role-based access control (RBAC) algorithms that assist network administrators or security officers manage access rights for various network users. Nyanchama, pages 1-2. For example, the teachings of Nyanchama can be applied to manage whether one can access the salary information of employees in an organization or whether users in a given project are assigned to one group. Nyanchama, pages 7-8. Nyanchama defines roles as a named set of privileges. Nyanchama, page 5. Role graphs are defined as acyclic, directed graphs in which the nodes represent the

Serial No: 09/854,031

roles in a system and the edges represent hierarchical relationship of users. Nyanchama, page 9. For example, a role graph may include nodes such as a company's president, vice presidents and junior employees. Nyanchama, Fig. 3.

Schmidt, on the other hand, discusses data flow analysis as model checking, and its relationship to a program's abstract interpretation trace. Schmidt, page 38, Abstract. A flowchart program, for example, can be expressed as concrete semantics transitions and a concrete computation tree, or as abstract semantics and an abstract tree. Schmidt, pages 39-40 and Figs. 1 and 2. Model checking is then performed to compute collecting semantics for an abstract tree. Schmidt, page 42, section 5.

It is respectfully submitted that Nyanchama and Schmidt deal with completely different subject matters. As discussed above, Nyanchama deals with managing access rights of network users, while Schmidt deals with the relationship of data flow analysis with a program's abstract interpretation trace. The Applicant finds no suggestion or motivation in any of the cited documents to combine the teachings of Nyanchama and Schmidt.

Furthermore, the Office Action provides no motivation for combining the teachings of Nyanchama and Schmidt other than "it would be obvious to one of ordinary skill in the art at the time the invention was made to translate a program into a graph to analyze the state of the program as known to one of ordinary skill in the art and as taught by Schmidt." Office Action, paragraph 12. Although the tendency to resort to hindsight is often difficult to avoid, the examination process must reach legal conclusions based on the prior art rather than the applicant's disclosure. See MPEP 2142.

For at least this reason, claims 1-100 are believed allowable over the cited documents. Allowance of claims 1-100 is therefore earnestly solicited.

CONCLUSION

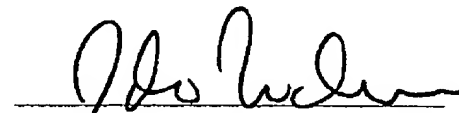
In view of the forgoing remarks, it is respectfully submitted that this case is now in condition for allowance and such action is respectfully requested. If any points remain at issue that the Examiner feels could best be resolved by a telephone interview, the Examiner is urged to contact the attorney below.

Serial No: 09/854,031

Please change Deposit Account 50-0510 the \$88 fee for an additional independent claim. No other fee is believed due with this Amendment, however, should such a fee be required please charge Deposit Account 50-0510. Should any extensions of time be required, please consider this a petition thereof and charge Deposit Account 50-0510 the required fee.

Respectfully submitted,

Dated: January 21, 2005



Ido Tuchman, Reg. No. 45,924
Law Office of Ido Tuchman
69-60 108th Street, Suite 503
Forest Hills, NY 11375
Telephone (718) 544-1110
Facsimile (718) 544-8588